long-range program of development is that a lot of important immediate savings may be shelved and that the long range program due to perfectionism never gets off the ground. Also the staff developing a long range program of new methods should have the opportunity of designing these methods based on experience and not only 'theory'.

These problems can be resolved only by carrying out a balanced program of short and long range development in close co-ordination. In this way it can be ensured that each short-range change harmonizes with subsequent short-range changes and long-range developments. Experience is gained with the new methods that will result in better long range plans for mechanization.

Finally, management faces a fundamental problem in seeing to it that we get a better balance between our production of computing machines and of business talent that can put these machines to effective use. There exists a tremendous imbalance today as illustrated at a recent convention of the Public Personnel Association in Quebec City:

> At a symposium at this convention, three speakers waxed enthusiastically about the glories of computers. Then the fourth panel speaker, the Assistant Director of the Budget Bureau of New York State pulled everyone down to earth with a statement somewhat as follows: "I have three computers there and six computers here! Our staff is preparing feasibility studies for new computers every day! We are installing new machines at a rate far greater than we can either get or retrain qualified personnel to use them! We are turning out feasibility studies justifying computers faster than we could possibly absorb the computers. There has been no clear thinking on how to deal with the problem of displaced personnel! Or retraining! Would someone show me where to find the staff to man those computers? And where to put the staff displaced by the computers!"

This speaker most effectively dramatized the problems due to a headlong rush into the computer field which, in solving some small problems, can create in its wake bigger problems if planning is too narrow.

These problems of redirecting the outlook of the manager of the future to create a harmonious environment, of removing mental barriers to processes of rationalization, of working out a balanced approach to the new methods, must and surely will be solved in order to raise management methods to the new levels which modern information technology makes possible.

Those who will learn to understand and solve these problems will be the successful managers of the computer age. The others would do best not to get involved with computers at all! ●

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